WHAT IS CLAIMED IS:

1. Apparatus for manufacturing a double-sided microlens, comprising:

a first mold base and a second mold base, said first mold base having a first alignment member for cooperating with correspondingly aligned second alignment member in said second mold base, and wherein each of said first and said second mold base has a first and second flexible insert, respectively, for accommodating a pair of juxtaposed mold cavities for receiving a microlens mold in a fixed relationship, and a set of alignment features for aligning said first flexible insert with said second flexible insert; and,

a molding assemblage having a first platen and an opposing second platen, said first platen supporting said first mold base and said second platen supporting said second mold base for molding a double-sided microlens in said microlens molds.

2. The apparatus recited in claim 1 wherein said first alignment member comprises a pair of spaced guide pins disposed in a pair of corresponding spaced apertures formed in said second mold base.

3. The apparatus recited in claim 2 wherein said set of alignment features comprise a pair of spaced tapered bushings arranged in said first flexible insert and alignably disposed in a corresponding pair of spaced receiving apertures formed in said second flexible insert.

4. The apparatus recited in claim 1 wherein said molding assemblage is an injection molding assemblage.

5. The apparatus recited in claim 1 wherein said molding assemblage is a compression molding assemblage.

6. The apparatus recited in claim 1 wherein said pair of juxtaposed mold cavities is formed in a polygonal substrate for receiving said microlens mold in a fixed relationship.

7. Method of making a double-sided microlens, comprising the steps of:

providing a first mold base and a second mold base each having a corresponding alignment feature and a corresponding insert flexibly mounted in said first mold base and said second mold base, said corresponding insert having a corresponding mold cavity and a pair of alignment features;

providing corresponding pairs of microlens molds configured for fixed arrangement into said corresponding mold cavity, said corresponding mold cavity being formed in a generally polygonal substrate;

arranging each one of said corresponding pairs of microlens molds into one of said corresponding mold cavity;

supportedly arranging said first mold base and said second mold base on a first platen and an opposed second platen, respectively, of a molding apparatus;

introducing a molten plastic into said corresponding mold cavity;

press closing said first platen upon said opposed second platen of said molding apparatus such that said microlens molds are aligned in said first mold base and said second mold base; and,

solidifying said molten plastic in said corresponding mold cavity to form a double-sided microlens.

8. The method recited in claim 7 wherein said step of providing corresponding pairs of microlens molds comprise the step of forming each one of said corresponding pairs of microlens molds in said generally polygonal substrate with a diamond cutting member.

9. The method recited in claim 8 wherein said generally polygonal substrate comprises materials selected from the group consisting of: hardened nickel; nickel alloy; brass; copper; aluminum, and silicon.

10. The method recited in claim 8 wherein said generally polygonal substrate is hardened nickel.

11. The method recited in claim 8 wherein said diamond cutting member has a generally spherical shape.

12. The method recited in claim 8 wherein said diamond cutting member has a generally aspherical shape.

13. The method recited in claim 8 wherein said diamond cutting member has an anamorphic shape.